

## **The U.S. High Production Volume (HPV) Chemical Challenge Program: Update**

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**Key Words:** HPV, SIDS, hazard assessment, categories, TSCA

The 1976 Toxic Substances Control Act (TSCA) authorizes the U.S. Environmental Protection Agency (EPA) to control toxic chemicals. Through rulemaking, companies are required to develop data on commercial chemicals to evaluate potential health or environmental hazards.

Over the past 25 years, EPA has issued rules for approximately 200 chemicals in commerce. By the late 1990s, analyses showed that only 7% of the approximately 3,000 high production volume chemicals (HPVs) had a complete set of basic health and environmental effects information that was known and publicly available. Chemicals manufactured in or imported into the U.S. in quantities of greater than one million pounds per year are considered HPVs. The basic hazard data set—known as SIDS (Screening Information Data Set)—includes information on the following: physicochemical properties, environmental fate, ecological (aquatic toxicity) effects, and human health effects based on laboratory animal studies.

In 1998, EPA partnered with Environmental Defense (ED), the American Chemistry Council (ACC), the American Petroleum Institute (API), and others to develop a new approach to obtain the basic data—the U.S. HPV Challenge Program—that encouraged the U.S. chemical industry to voluntarily make SIDS-type information publicly available. In an unprecedented response, 418 chemical companies committed to provide the public with environmental fate, health, and ecological effects information on 2,159 HPVs over a five-year period.

With this voluntary approach, a large amount of data have become publicly available in an accelerated period of time: over 8,300 studies (4,950 health studies, 1,370 ecological effects studies, and 2,070 physicochemical properties and environmental fates studies), more than half of which were unpublished, are currently on the EPA HPV website ([www.epa.gov/chemrtk/volchall.htm](http://www.epa.gov/chemrtk/volchall.htm)).

Moreover, use of a novel approach to evaluate data and consider future testing needs is being used. Traditionally, chemical testing is done on an individual chemical basis. In the Program, industry is encouraged to “pool” individual chemicals that may behave similarly into “categories.” Data from tested members in the category may be extrapolated/interpolated to other, non-tested category members. This category approach saves time, money, and animals since testing of each chemical in a category may not be required, but only certain “representative” chemicals.

This collaborative, voluntary program provides health and environmental information on 2,159 chemicals faster and cheaper than before and allows the public to make informed decisions about their own chemical exposures.